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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,621	12/10/2001	Hideyuki Takaoka	P 290437 OL98801N-US	1161
909	7590	11/22/2006	EXAMINER TURNER, SAMUEL A	
PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102			ART UNIT	PAPER NUMBER

2877

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,621

Applicant(s)

TAKAOKA, HIDEYUKI

Examiner

Samuel A. Turner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8, 11, 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1-4, 9, 10, 12, 13, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 16, 17 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings were received on 10 May 2004. These drawings are accepted by the examiner.

Claim Objections

In claim 13, $L_c \geq D_f$, $v_2 > v_3 > v$ should be $L_c \geq D_f$, $v_2 > v_3 > v_1$.

In claims 16 and 17, "optical system or optical apparatus" should be "optical apparatus".

In claims 18-20, "optical system or optical apparatus" should be "optical system".

In claim 20 there is no antecedent basis for (said optical path length control mechanism. Antecedent basis is found in claim 4.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9, 10, 12, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 9, the claim lacks antecedent basis for $L_c \geq D_f$, $v_2 > v_1$ when the claim is dependent from claims 8, 7/5, and 5. Note that antecedent basis

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is provided when dependent from claims 8, 7/6, 6, and 5. An objective with a numerical aperture that satisfies the condition of $L_c \geq D_f$ is defined in claim 6.

With regard to claim 10, the claim lacks antecedent basis for $L_c < D_f$, $v_1 > v_2$. Note that an objective with a numerical aperture that satisfies the condition of $L_c < D_f$ is defined in claim 7.

With regard to claim 12, the claim lacks antecedent basis for $L_c \geq D_f$, $v_2 > v_3 > v_1$ when the claim is dependent from claims 8, 7/5, and 5. Note that antecedent basis is provided when dependent from claims 8, 7/6, 6, and 5. An objective with a numerical aperture that satisfies the condition of $L_c \geq D_f$ is defined in claim 6.

With regard to claim 13, the claim lacks antecedent basis for $L_c < D_f$, $v_1 > v_2 > v_3$. Note that an objective with a numerical aperture that satisfies the condition of $L_c < D_f$ is defined in claim 7.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Swanson et al(5,321,501).

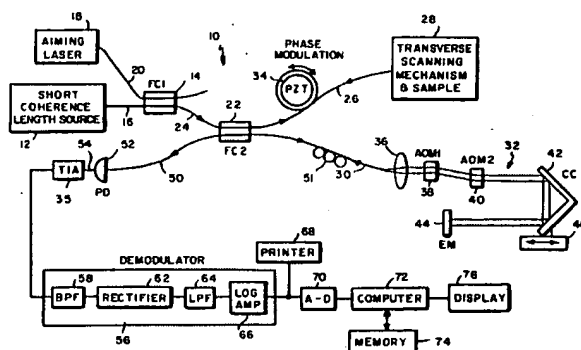


FIG. 1A

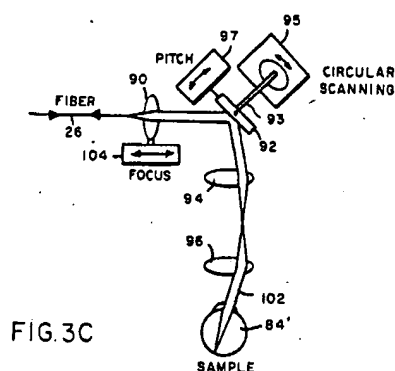


FIG. 3C

With regard to claim 1, Swanson et al teach an optical system comprising: a light source(12), a branching member(22), a scanning system(28), a combining member(22), a light detecting element(52), at least one objective(96), and a beam diameter changing system(90,104).

As to claim 2, see figure 3C for the pupil relaying optics.

With regard to claim 3, Swanson et al teach an optical system comprising: a light source(12), a branching member(22), a scanning system(28), a combining member(22), a light detecting element(52), a scanning member(92), at least one objective(96), and a correcting mechanism(90,104).

As to claim 4, further comprising a path length control mechanism(42,46).

The remaining claim limitations found in claim 19 are functional limitations and these limitations can be met by the prior art if the structure of the prior art is capable of performing the claimed functions. Any change in the N.A. of lens 96 would be compensated by a change in the path length of reflector 42.

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2114 [R-1] Apparatus and Article Claims — Functional Language

APPARATUS CLAIMS MUST BE STRUCTURALLY DISTINGUISHABLE FROM
THE PRIOR ART

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

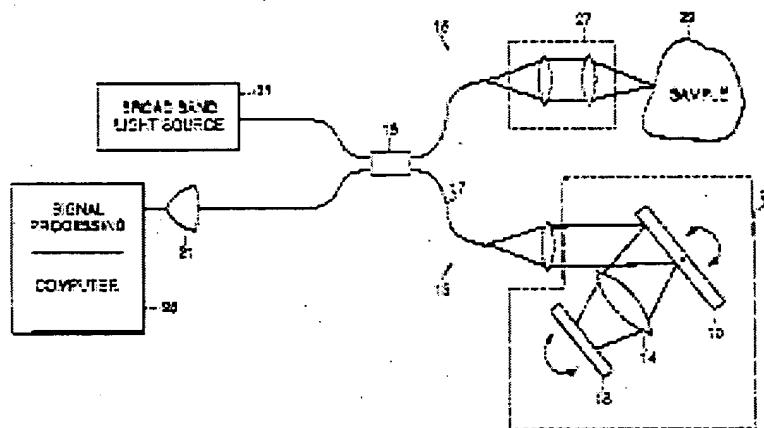
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson et al(5,321,501) in view of Tearney et al(6,111,645).

Tearney et al teach the use of a dispersion adjusting element(11) in the reference path of a coherence domain reflectometer.



It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the coherence domain reflectometer of Swanson by including a dispersion compensator in the reference path in order to compensate for the dispersion mismatches.

Allowable Subject Matter

Claims 5-8, 11, 14 and 15 are allowed in view of the prior art of record.

Claims 9, 10, 12, and 13 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 16, 17 and 20 would be allowable if rewritten or amended to overcome the abjection(s) to minor informalities, set forth in this Office action.

With regard to claims 5-17, and 20; applicant's arguments of 10 May 2004 are persuasive and overcome the rejections of the previous office action. See applicant's remarks at page 12, last paragraph.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 18, and 19 have been considered but are moot in view of the new ground(s) of rejection.

With regard to claim 1, as the lens 90 is moved along the optical axis the diameter of the collimated beam will change, this meets the claimed limitation.

With regard to claim 3, the claim as amended is met by the teachings of Swanson.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel A. Turner whose phone number is 571-272-2432.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached on 571-272-2800 ext. 77.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Samuel A. Turner
Primary Examiner
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